

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. – 16. (Cancelled).

17. (Currently Amended): A catheter for use in performing a medical procedure comprising:

an elongated tubular structure having a proximal end and a distal end;

said tubular structure having an external diameter of no greater than about 4 French; and

said distal end of said tubular structure having, on an end of a tip section, an elastic restrictor that, when operable, changes in size in response to a change in fluid flow through said tubular structure to provide a variable amount of fluid force restriction as fluid flows through said elastic restrictor,

said distal end of said tubular structure further having, on a sidewall of said ~~distal end tubular structure~~, a plurality of openings, wherein at least one of said openings is formed on said sidewall at an acute angle with respect to a longitudinal axis of said distal end of ~~angled towards said proximal end of~~ said tubular structure that contains said sidewall, and wherein said openings are arranged such that forces resulting from fluid flow out of said openings and from fluid flow out of said elastic restrictor are substantially balanced in both axial and radial directions, with respect to said longitudinal axis of said distal end of said tubular structure, during performance of said medical procedure.

18. (Cancelled).

19. (Previously Presented): The catheter of claim 17, wherein said restrictor comprises a diameter of approximately 0.305 mm.

20. – 35. (Cancelled).

36. (Currently Amended): A catheter assembly comprising:

a hub section located at a proximal end of said catheter assembly;

a shaft section attached to a distal end of said hub;

a stem section connected to a distal end of said shaft, said stem section comprising one or more openings formed ~~[[in]]~~ on a sidewall of said stem section, wherein at least one of said openings is formed on said sidewall at an acute angle with respect to a longitudinal axis of a portion of said stem section containing said sidewall ~~angled towards said proximal end of said catheter assembly~~; and

a distal tip section attached to a distal end of said stem section, said distal tip section including, on an end, a small opening, said small opening comprising an elastic restrictor that, when operable, changes in size in response to a change in fluid flow through said catheter assembly to provide a variable amount of fluid force restriction as fluid flows through said elastic restrictor, such that forces resulting from fluid flow out of said openings in said stem section and from fluid flow out of said elastic restrictor are substantially balanced in both axial and radial directions with respect to said longitudinal axis of said portion of said stem section containing said sidewall.

37. (Previously Presented): The catheter assembly of claim 36, wherein said openings of said stem section are holes.

38. (Cancelled).

39. (Previously Presented): The catheter assembly of claim 36, wherein said at least one of said openings of said stem section causes at least some fluid exiting an internal lumen of said catheter assembly to flow in a retrograde direction to a fluid stream.

40. (Previously Presented): The catheter assembly of claim 36, wherein said openings of said stem section and said small opening of said distal tip section are configured to provide a cumulative, substantially zero fluid-force vector in all directions.

41. (Cancelled).

42. (Previously Presented): The catheter assembly of claim 36, wherein said catheter assembly has a maximum external diameter of about 4 French.

43. (Previously Presented): The catheter of claim 17, wherein said elastic restrictor, when operable, increases in size in response to an increase in fluid flow through said tubular structure.

44. (Previously Presented): The catheter assembly of claim 36, wherein said elastic restrictor, when operable, increases in size in response to an increase in fluid flow through said catheter assembly.

45. (Previously Presented): The catheter of claim 17, wherein said openings are arranged such that forces resulting from fluid flow out of said openings and out of said elastic restrictor result in a substantially net fluid force of zero.

46. (Previously Presented): The catheter assembly of claim 36, wherein forces resulting from fluid flow out of said openings in said stem section and out of said small opening of said distal tip section result in a substantially net fluid force of zero.

47. (Previously Presented): The catheter of claim 17, wherein said elastic restrictor is not included on said sidewall of said distal end of said tubular structure.

48. (Previously Presented): The catheter of claim 17, wherein said tubular structure enables fluid flow rates in a range of approximately 0 to 40 ml/sec without failure of said tubular structure.

49. (Previously Presented): The catheter assembly of claim 36, wherein said elastic restrictor is not formed in said sidewall of said stem section.

50. (New): The catheter of claim 17, wherein said elastic restrictor is formed along said longitudinal axis of said distal end of said tubular structure that contains said sidewall on which said openings are formed.

51. (New): The catheter assembly of claim 36, wherein said elastic restrictor is formed along said longitudinal axis of said portion of said stem section that contains said sidewall on which said one or more openings are formed.

52. (New): The catheter of claim 17, wherein with respect to said longitudinal axis of said distal end of said tubular structure that contains said sidewall on which said openings are formed, at least one axial force vector component resulting from fluid flow out of said at least one angled opening is substantially balanced by an axial force vector component resulting from fluid flow out of said elastic restrictor.

53. (New): The catheter assembly of claim 36, wherein with respect to said longitudinal axis of said portion of said stem section containing said sidewall on which said one or more openings are formed, at least one axial force vector component resulting from fluid flow out of said at least one angled opening is substantially balanced by an axial force vector component resulting from fluid flow out of said elastic restrictor.